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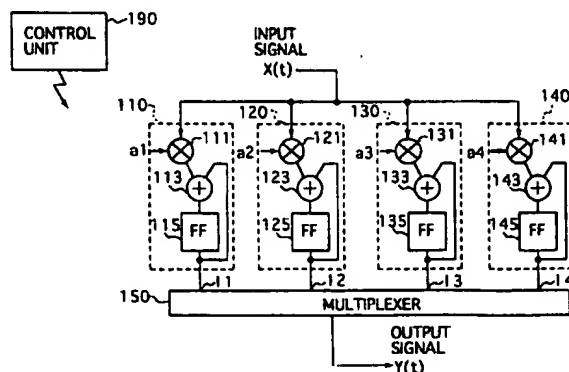
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(54) **Matched filter and method of phase synchronization in a receiver**

(57) Herein disclosed is a matched filter for synchronizing a phase of an input wave signal with that of a desired wave signal, thereby making it possible to decrease the power consumption. The matched filter comprises a plurality of correlation units (110,120,130,140) each having a multiplier (111,121,131,141) and an integrator (113,115;123,125;133,135;141,145). The multiplier of each correlation units is designed to multiply an input signal ($X(t)$) by a predetermined coefficient (a_1, a_2, a_3, a_4) at predetermined intervals in a predetermined operation cycle of the matched filter. The coefficient (a_1, a_2, a_3, a_4) sequentially varies at the intervals. The integrator (113,115;123,125;133,135;141,145) of

each correlation units is designed to integrate the product obtained by the multiplier (111,121,131,141) over the operation cycle into a correlation value. The matched filter further comprises control means (190) and a multiplexer (150). The control means (190) is designed to output a plurality of control signals at the intervals to direct the correlation units (110,120,130,140) respectively, to start operating. The multiplexer (150) electrically connected to the correlation units (110,120,130,140) for inputting the correlation values and sequentially outputting one of the correlation values in response to the control signal and resetting the one correlation value.

FIG. 1





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EUROPEAN SEARCH REPORT

Application Number
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Y	* abstract * * column 10, line 47 - column 11, line 34 * * column 12, line 5 - line 9 *	10,17	TECHNICAL FIELDS SEARCHED (Int.Cl.6) H03H H04B
The present search report has been drawn up for all claims			
Place of search MUNICH		Date of completion of the search 7 August 2002	Examiner Giglietto, M
<p>CATEGORY OF CITED DOCUMENTS</p> <p>X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document</p> <p>T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document</p>			

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<p>CATEGORY OF CITED DOCUMENTS</p> <p>X : particularly relevant if taken alone</p> <p>Y : particularly relevant if combined with another document of the same category</p> <p>A : technological background</p> <p>O : non-written disclosure</p> <p>P : intermediate document</p> <p>T : theory or principle underlying the invention</p> <p>E : earlier patent document, but published on, or after the filing date</p> <p>D : document cited in the application</p> <p>L : document cited for other reasons</p> <p>& : member of the same patent family, corresponding document</p>			

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**ANNEX TO THE EUROPEAN SEARCH REPORT
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This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
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